

## **CLIP ON THERMAL WELDER**

### **ABSTRACT**

A clip on welder includes two pairs of opposed grippers defined by pivotally attached upper and lower frames for latching the welder to heat weldable material, such as a length of tubing, upon actuation of a start button by an operator; thereafter, the welder operates unattended.

5 At least a jaw of a pair of jaws disposed intermediate the two pairs of grippers heats the material compressed and lodged therebetween to form a weld in or across the material. A source of gas, such as air, under pressure selectively connected to a bellows provides the power to pivot the upper and lower frames into gripping engagement with the material. A source of electrical signals provides the power to heat the material intermediate the pair of jaws. One or more

10 thermocouples senses the heat of the jaws and generates signals used to control the application of power and to control cooling. After completion of the weld, cooling air is directed to the jaws until the thermocouple(s) signal(s) indicates a sufficiently low temperature. Release of the welder from the material is in response to actuation of a stop button by the operator.